



## Networks and critical applications



### Evolution From 1 to 10 kVA

**On Line Double Conversion Rack-mount UPS. The ideal solution to effectively protect your critical systems and industrial environments.**

The E6 LCD RT EVOLUTION range relies on microprocessor control technology intended in particular for users of critical systems that require reliability, availability and high performance at the same time (telecommunications equipment, critical industrial applications, etc.).



On Line Double Conversion Technology

#### High Performance and reliability

E6 LCD RT Evolution offers your connected devices a high level of protection against overvoltage, overload and short-circuits:



E6 LCD RT Evolution 1 to 3 kVA

- Output power factor of 0.9.
- Up to 3 operating modes: Normal, Eco and Advanced Eco (efficiency up to 98%).
- Programmable outlets enabling different groups of loads to be easily and independently controlled. (models up to 3 kVA)
- Connector for emergency stop EPO/CPAU function ensuring the safety of personnel and equipment in the event of an emergency.



Rack/Tower convertible



Redundant parallelizable\*

#### Compatible design

The practical and versatile E6 LCD RT Evolution is designed for simple installation. Its compact 2 in 1 design fits easily into a variety of environments: horizontally, in a patch bay with attachment brackets (included) or vertically in «tower» with its base (included). A reinforcing attachment (rack kit) option is recommended to secure UPS devices in unequipped patch bays.



LCD control screen

#### The most reliable of technologies



E6 LCD RT Evolution 5 to 10 kVA

The On Line Double Conversion technology delivers a perfect sinewave output current and provides thorough and effective protection of critical devices.



Remote control software

#### Parallel installation

E6 LCD RT Evolution, an ideal solution for data centres from 5 kVA upward, can connect up to 3 UPS devices in redundant parallel mode (N+X) and thus increase the capacity up to 30 kVA..



Extended backup time possible\*

#### Essential advantages

- Warm swappable batteries enable an uninterrupted supply to critical and key loads during maintenance work.
- Audible and visual alarms to warn in event of a problem.
- Cold start function if there is no mains power.
- UPS automatic restart when mains power restored

\* see models concerned below



### Power factor of 0.9

The output power factor is optimal, reaching 0.9 on standard models from 1 to 10 kVA, to provide high performance and efficiency for critical applications. The 5 to 10 kVA long battery life models also have a power factor of 0.9 (NB: 0.8 for models from 1 to 3 kVA).

### Energy saving ECO mode

Efficiency of up to 92% from 1 to 3 kVA and 96% for powers from 5 to 10 kVA reduce energy consumption and costs. This operating mode delivers a static bypass power supply and offers timely return to on-line double conversion if required. The E6 devices from 1 to 3 kVA also have an Advanced Eco mode that provides up to 98% efficiency.



### User-friendly LCD display

The accurate and user-friendly LCD screen displays status and parameters in real time. It is intuitive and multi-directional which allows both Tower and Rack-mount. The front panel rotating LCD display gives direct access to UPS settings. Operating modes such as adjusting output voltage, frequency fine tuning, by-pass voltage range adjustments and alarm statuses can easily be changed.



**LCD Rack Display**  
E6 LCD RT Evolution  
1000 VA



**LCD Tower Display**  
E6 LCD RT Evolution  
1000 VA

### Frequency converter

Simple programming from the front panel LCD screen enables the frequency to be set to 50 or 60 Hz.

### Overload protection

Protection of internal power components from any foreseeable deterioration and prevention of connection errors.



### Communication

USB or RS 232 ports enable communication between the UPS and the various stations and IT servers they are protecting. The SNMP agent is optional.



### EPO emergency stop control

This function ensures the safety of personnel and equipment in the event of fire or any other emergency situation by initiating a total and immediate shutdown of the UPS.

### Auto-test at start-up

Automatic control of loads, power supply and UPS internal operation for greater reliability.

### Cold start function

It enables an emergency situation involving a total power cut to be overcome by starting the UPS using batteries if there is no mains power supply.

## Batteries

### Adapted battery cabinets

Other battery cabinets can be added to increase backup time.



### Intelligent battery chargers to optimise battery performance

A battery charger from 1 to 3 kVA with 2 levels reduces charging time and adjusts the charging voltage according to the outside temperature to increase the lifetime of batteries and thereby generate energy savings.

## Advantages of models from 1 to 3 kVA



### • Programmable outlets

Programmable outlets allow users to easily control different load groups separately. It will therefore be possible to increase the backup time on the most strategic and vital hardware, during a power outage, by stopping non-critical hardware connected to programmable outlets. These outlets are easy to manage via the LCD display and/or Infopower software.

### • Warm swappable batteries

The E6 LCD RT EVOLUTION, equipped with a practical and versatile battery system, gives the user the opportunity to replace batteries without stopping the UPS and consequently without interrupting the power supply to critical and vital loads.

## Advantages of models from 5 to 10 kVA



### E6 LCD RT EVOLUTION UPS devices upward of 5 kVA provide the following distinct advantages:

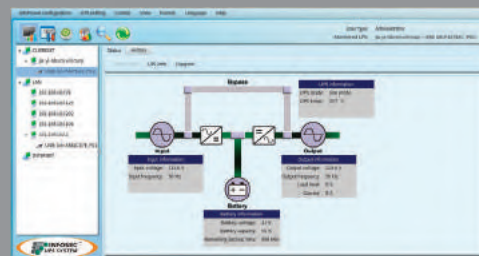
- Parallel installation: option to connect up to 3 UPS devices in redundant parallel mode (N+X)
- Battery chargers: UPSs upward of 5 kVA are fitted with extendable chargers with 3 levels optimising battery performance as well as their recharge time and extending their useful life even further. In addition, due to an extendible design, a charger can be connected in parallel as needed, thereby offering a greater battery charge capacity.

## COMMUNICATION

### communication software :

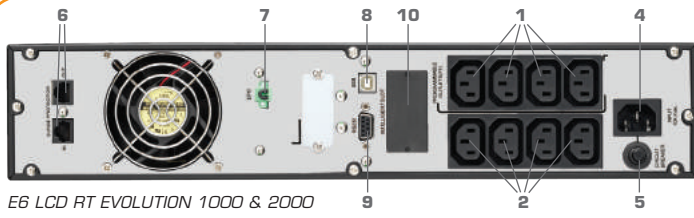
An E6 LCD RT EVOLUTION UPS can close files automatically on its own, if there is no power, thanks to the InfoPower control software (supplied as standard), and in doing so save data from all the PCs in a network.

The communication software also offers a graphic interface to view system status, various measurements, events log, etc.

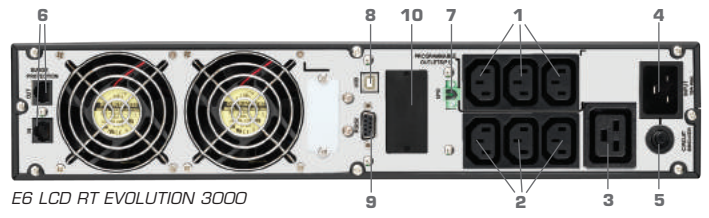


# CONNECTIONS

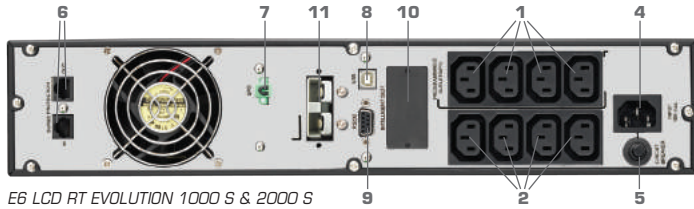
A connector tailored to industrial environments.



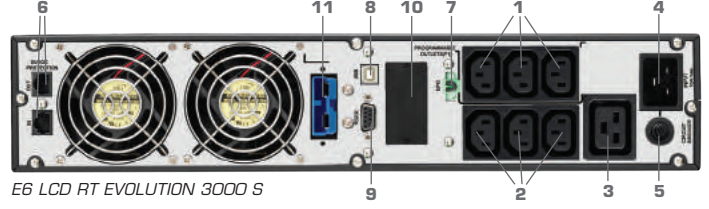
E6 LCD RT EVOLUTION 1000 & 2000



E6 LCD RT EVOLUTION 3000

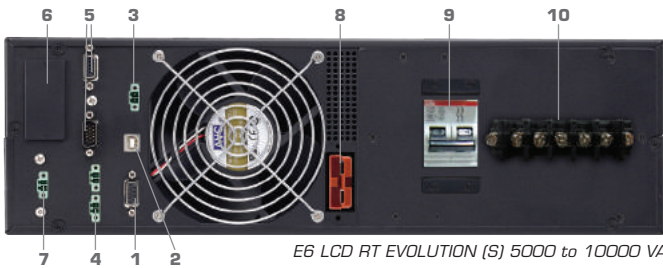


E6 LCD RT EVOLUTION 1000 S & 2000 S

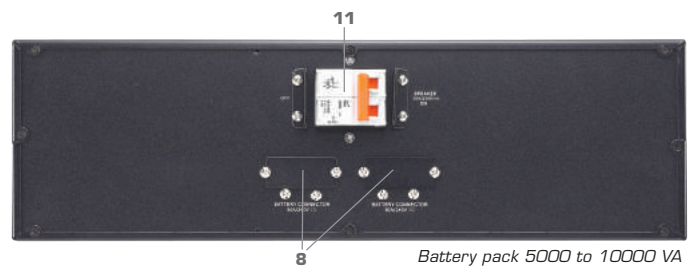


E6 LCD RT EVOLUTION 3000 S

- 1/ Programmables protected UPS outlets (10A)
- 2/ Standards protected UPS outlets (10A)
- 3/ Standards protected UPS outlets (16A)
- 4/ AC input cable (1000 VA:10A ; 2000 and 3000 VA:16A)
- 5/ Input breaker
- 6/ Network/Fax/Modem surge protection
- 7/ EPO (Emergency power off)
- 8/ USB communication port
- 9/ RS-232 communication port
- 10/ SNMP intelligent slot
- 11/ External battery connector (S models only)



E6 LCD RT EVOLUTION (S) 5000 to 10000 VA



Battery pack 5000 to 10000 VA

- 1/ RS-232 communication port
- 2/ USB communication port
- 3/ EPO (Emergency power off)
- 4/ Parallel port 1
- 5/ Parallel port 2
- 6/ SNMP intelligent slot
- 7/ EMBS (External Maintain Bypass Switch) port
- 8/ External Battery connector
- 9/ Input circuit breaker
- 10/ Input/Output terminal
- 11/ Battery pack output circuit breaker

# OPTIONS

## ■ SNMP agent:

The use of SNMP agent with E6 LCD RT EVOLUTION UPS devices makes it easier to manage the UPS due to its many special features:

- Connection to the Ethernet network and identification by IP address
- Low battery detection.
- Configuring and programming switch-off and restarts of the system on a weekly (or other) basis.
- UPS configuration locally or remotely.
- Self-diagnosis of the UPS devices while operating.
- Automatic shutdown according to pre-defined priorities on network PCs.
- Sending warning messages to users of the network / mail / GSM, etc.
- Events log.



## ■ Backup extensions:

Opportunity to increase battery power for unstable or highly disrupted environments. The S versions (extended backup time) are delivered without an internal battery but with external battery packs.



## ■ AS400 dry contact card:

The AS400 communication card supplies dry contacts to feedback alarms from your UPS (e.g. centralized technical management).

Depending on the applications, dry contacts may normally be open or closed.

## ■ External maintain bypass switch (EMBS) for E6 LCD RT EVOLUTION UPS devices from 1 to 10 kVA.

- Provides continuous power to connected equipment during maintenance of the UPS via a rotary switch.
- Provides a large number of outlets for extended use.
- Rack or Tower model depending on the working environment (1 to 3 kVA).
- Simple installation (plug and play for models from 1 to 3 kVA).
- Available for all UPS devices from 1 to 10 kVA.



## ■ Rack kit :

Enables securing to a patch bay



EG LCD RT EVOLUTION 1000 (S)	EG LCD RT EVOLUTION 2000 (S)	EG LCD RT EVOLUTION 3000 (S)	EG LCD RT EVOLUTION 5000 (S)	EG LCD RT EVOLUTION 6000 (S)	EG LCD RT EVOLUTION 8000 (S)	EG LCD RT EVOLUTION 10000 (S)
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## GENERAL CHARACTERISTICS

Technology		On Line Double Conversion						
<b>Power (VA)</b>		1000 VA	2000 VA	3000 VA	5000 VA	6000 VA	8000 VA	10000 VA
<b>Power (W)</b>	<b>Standard</b>	900 W	1800 W	2700 W	4500 W	5400 W	7200 W	9000 W
	<b>Long Backup time (S)</b>	800 W	1600 W	2400 W	4500 W	5400 W	7200 W	9000 W
<b>Power factor</b>	<b>Standard</b>	0,9			0,9			
	<b>Long Backup time (S)</b>							

## PHYSICAL CHARACTERISTICS

	Dim. D x W x H (mm) - UPS	415 x 440 x 88 (2U)	515 x 440 x 88 (2U)	635 x 440 x 88 (2U)	580 x 440 x 133 (3U)	580 x 440 x 133 (3U)	668 x 440 x 133 (3U)	668 x 440 x 133 (3U)
<b>Standard</b>	<b>Dim. D x W x H (mm) - Battery bank</b>	-	-	-	580 x 440 x 133 (3U)	580 x 440 x 133 (3U)	580 x 440 x 133 (3U)	580 x 440 x 133 (3U)
	<b>Net weight (kg) : UPS + Battery bank</b>	12,9	20,6	28	17 + 57	17 + 57	20 + 63	20 + 63
	<b>Long Backup time (S)</b>	415 x 440 x 88 (2U)	515 x 440 x 88 (2U)	635 x 440 x 88 (2U)	580 x 440 x 133 (3U)	580 x 440 x 133 (3U)	668 x 440 x 133 (3U)	668 x 440 x 133 (3U)
	<b>Net weight (kg)</b>	8,6	11,3	13,8	17	17	20	20

## TECHNICAL INPUT CHARACTERISTICS

<b>Low voltage range</b>	<b>Low Line transfer</b> (based on load percentage : 100%-80% / 80%-70% / 70%-60% / 60%-0%)	<b>110 V*</b>	80 VAC / 70 VAC / 60 VAC / 55 VAC +/- 5%	-
		<b>230 V*</b>	160 VAC / 140 VAC / 120 VAC / 110 VAC +/- 5%	176 VAC / 154 VAC / 132 VAC / 110 VAC +/- 2%
	<b>Low Line comeback</b>	<b>110 V</b>	85 VAC / 75 VAC / 65 VAC / 60 VAC +/- 5%	-
<b>High voltage range</b>		<b>230 V</b>	170 VAC / 150 VAC / 130 VAC / 120 VAC +/- 5%	176 VAC / 154 VAC / 132 VAC / 110 VAC +/- 2%
	<b>High Line transfer</b>	<b>110 V</b>	150 VAC +/- 5%	-
	<b>High Line comeback</b>	<b>230 V</b>	300 VAC +/- 5%	300 VAC
		<b>110 V</b>	140 VAC +/- 5%	-
			290 VAC +/- 5%	290 VAC
<b>Frequency range</b>			50 Hz : 40 Hz ~ 70 Hz	50 Hz : 46 Hz ~ 54 Hz ou 60 Hz : 56 Hz ~ 64 Hz
<b>Phase</b>			Single phase	Single phase
<b>Power factor</b>			0,99 at 100% load	0,99 at 100% load

## TECHNICAL OUTPUT CHARACTERISTICS

<b>Voltage</b>	[110 / 115 / 120 / 127 VAC] or [208 / 220 / 230 / 240 VAC]	200 / 208 / 220 / 230 / 240 VAC
<b>AC voltage regulation (Batt mode)</b>	+/- 1%	+/- 1%
<b>Frequency range (Synchronized range)</b>	50 Hz : 47 ~ 53 Hz ou 60 Hz : 57 ~ 63 Hz	50 Hz : 46 Hz ~ 54 Hz ou 60 Hz : 56 Hz ~ 64 Hz
<b>Frequency range (Batt mode)</b>	50 Hz +/- 0,2 Hz ou 60 Hz +/- 0,2 Hz	50 Hz +/- 0,1 Hz ou 60 Hz +/- 0,1 Hz
<b>Current crest rating</b>	5 : 1 (max)	3 : 1 (max)
<b>Harmonic distortion</b>	<= 2% THD (linear load); <= 8% THD (batt mode before shut down)	<= 2% THD (linear load); <= 4% THD (batt mode before shut down)
<b>Transfer time</b>	<b>Line mode to battery mode</b>	Zero
	<b>Inverter to Bypass</b>	Zero
<b>Waveform</b>	4 ms (Typical)	Pure sinewave
<b>Output outlets IEC standards / programmables</b>	4 (10A) / 4 (10A)	3(10A) + 1(16A) / 3 (10A)
		Terminal board

## EFFICIENCY

<b>AC mode</b>	86%	88%	90%
<b>Battery mode</b>	83%	85%	88%
<b>Eco mode</b>	92%		96%

## BATTERY

<b>Standard model</b>	<b>Battery type</b>	12 V / 9 AH			12 V / 7 AH	12 V / 7 AH	12 V / 9 AH	12 V / 9 AH
	<b>Recharging voltage</b>	24 Vdc	48 Vdc	72 Vdc	240 Vdc		240 Vdc	
	<b>Number</b>	2	4	6	20**	20**	20**	20**
	<b>Typical recharge time</b>	4 hours recover to 90% capacity			7 hours recover to 90% capacity	7 hours recover to 90% capacity	9 hours recover to 90% capacity	9 hours recover to 90% capacity
	<b>Charging current (max)</b>	1A			1A			
<b>Long backup time model (S)</b>	<b>Backup time</b>	From 4 to 30 minutes depending on the connected load						
	<b>Typical recharge time</b>	Depending on the capacity of external batteries						
	<b>Charging current (max)</b>	4A or 8A			4A			

## DISPLAY

<b>LCD screen</b>	Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicator.
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## AUDIBLE ALARMS

<b>Battery mode</b>	Sounding every 4 seconds
<b>Low battery</b>	Sounding every second
<b>Overload</b>	Sounding twice every second
<b>Fault</b>	Continuously sounding

## MANAGEMENT / COMMUNICATION

<b>Communication</b>	USB & RS232 port and Infopower included software (support Windows family, Linux, Unix and MAC)
<b>Parallel connection</b>	Optional SNMP
	Parallel port

## ENVIRONMENT

<b>Ideal environment</b>	20 - 90% relative humidity @ 0-40° non condensing	0 - 95% relative humidity @ 0-40° non condensing
<b>Operating Altitude</b>	Up to 1000 m above sea level (> 1000 m 1% deterioration for every 100 m)	
<b>Noise level</b>	less than 50dBA @ 1 meter	
<b>Heat dissipation max - LV (110 V)</b>	163 W / 556,31 Btu/h	257 W / 877,13 Btu/h
	256 W / 873,5 Btu/h	416 W / 1419,80 Btu/h
<b>Heat dissipation max - HV (230 V)</b>	141 W / 481,11 Btu/h	256 W / 873,5 Btu/h
	348 W / 1187,41 Btu/h	600 W / 2047,8 Btu/h
	600 W / 2047,8 Btu/h	600 W / 2047,8 Btu/h
	600 W / 2047,8 Btu/h	600 W / 2047,8 Btu/h

## NORMS

<b>Standard</b>	CE RoHS	CE RoHS, cTUVus
<b>EMC (Electromagnetic compatibility)</b>	EN 62040-2 : 2006	EN 62040-2 : 2006
<b>Low voltage (Safety)</b>	EN62040-1 : 2008	EN62040-1 : 2008, UL 1778/R:2006;CSA C22.2 NO.107.3-05/R:2006

## SALES INFO

<b>Warranty</b>	2 years						
<b>Generators - standard versions</b>	3700085 67113 9	3700085 67114 6	3700085 67115 3	3700085 67119 1	3700085 67120 7	3700085 67121 4	3700085 67122 1
<b>Generators - Long backup time version (S)</b>	3700085 67116 0	3700085 67117 7	3700085 67118 4	3700085 67123 8	3700085 67124 5	3700085 67125 2	3700085 67126 9

\* Low voltage (110V) and high voltage (230V) are different products

\*\* When using internal batteries from 18-19, the unit will de-rate according to below formula : P=Prating x N/20

## Package content

- E6 LCD RT EVOLUTION,
- 1 USB cable,
- 1 RS 232 cable,
- 1 input cable (1 to 3 kVA models),
- 4 IEC 10A output cable (1 to 3 kVA models),
- 2 19" Rackmount Output Bracket,
- 1 floor standing system,
- 1 user manual,
- Infopower Software
- 2 cables for parallel ports (> 5kVA)
- 1 câble de batterie (> 5kVA)

## Options

- Rack kit (Ref : 61429)
- SNMP card (Ref : 61424)
- Dry contact card (Ref : 61433)
- RS 485 card (Ref : 61439)
- External Maintain Bypass switch

Model	Ref
External bypass RM-IEC	61442
External bypass RM-FR	61443
External bypas E6 5 to 10k	61444

- Additional Battery banks (until 30 minutes backup time depending on the connected load)

Model	Ref
BB E6 LCD RT E 1000	65389
BB E6 LCD RT E 2000	65391
BB E6 LCD RT E 3000	65393
BB E6 LCD RT E 5000	67136
BB E6 LCD RT E 6000	67136
BB E6 LCD RT E 8000	67137
BB E6 LCD RT E 10000	67137

- Isolation transformer

Model	Ref
Isolation transformer for 5 and 6 kVA	67146
Isolation transformer for 8 and 10 kVA	67147

## Warranty

Two-year warranty



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